U.S. Army Corps of Engineers

Business Lines Supported by NDC

- **Navigation**
  - Waterborne Commerce
  - Infrastructure
  - Locks
  - Dredging
- **Hydropower**
- **Recreation**
- **Environment**
  - Stewardship
  - Compliance
- **Regulatory**
- **Water Supply**

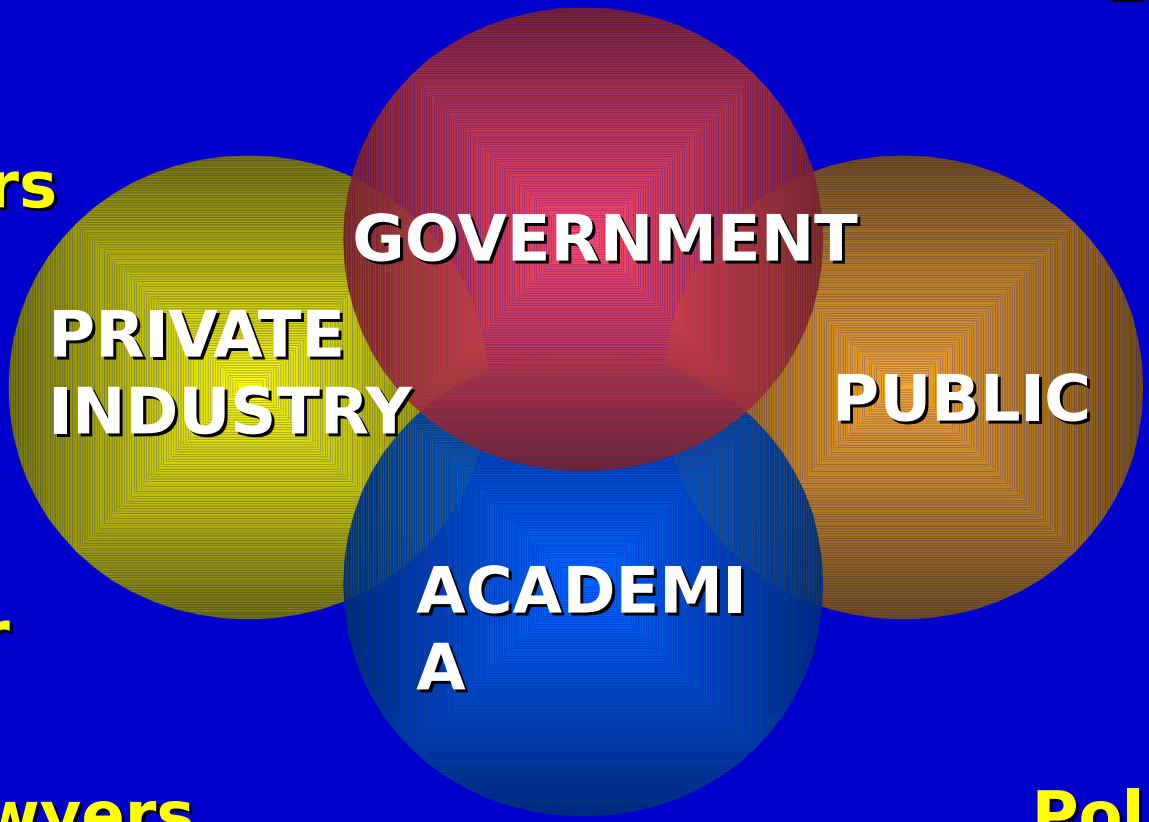
U.S. Army Corps of Engineers

Navigation Data Center Serves the Nation

- **Corps** - Supports Corps Missions of Navigation, Hydropower, Recreation, Environment, Regulatory, Flood Damage Reduction and Water Supply
- **Federal** – Federally Authorized Collection Agent with the Responsibility to Supply Data/Statistics to the Nation
- **International** - Represents U.S. in Statistics and Data Standards, Protocols, and Exchanges

U.S. Army Corps of Engineers

Navigation Data Center Customers



Program Managers

Planners

Economists

Operators

Engineers

Brokers

Taxing Agencies

Military

Lawyers

Policy Makers

Regulators

U.S. Army Corps of Engineers

Institute for Water Resources Navigation Data Center

- **Mission: Provide Information Across Business Lines**

- Decision Support – Operations, R&D, Planning & Investments
- Performance Measures
- Performance Based Budgeting
- Competitive Sourcing - Management

- Expenditures, Activities & Reviews
- Inventories & Characteristics (locks, dams, rec. sites, docks, etc.)
- Outputs/Utilization (tons, trips, ton-miles, megawatts, etc.)
- Performance (vessel delay time, availability, campsite visits, etc.)

U.S. Army Corps of Engineers

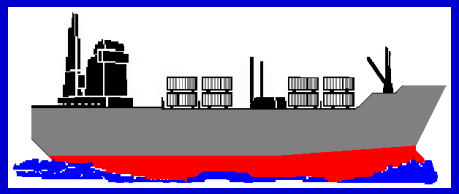
Navigation Data Center
Corps Management Views

Real Time/Monthly OPERATORS	ANNUAL EXECUTIVES	DECADE PLANNERS
Dredge Management	Budget Priorities	Investment Planning
Lock Management	Systems Management	Infrastructure Analysis
Vessel Operations	Users Board Advice	Mobilization Planning
Permit Applications	Tax Policy	Project Evaluation, Design and Engineering
Harbor Operations	Regulatory Policy	Recovery Fee Analysis
Emergency Operations	Legislative Support	Intelligence Analysis
Hydropower Management	O&M Policy And Procedures	
Recreation Management	Energy Policy	
Environmental Compli.		
Homeland Security		

U.S. Army Corps of Engineers

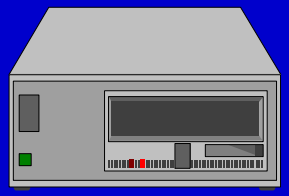
Navigation Data Center Work Flow

Collection

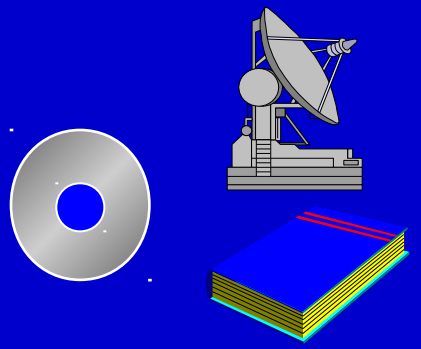


Input

Data Processing



Distribution



Partnership with:
- Customs
- Carriers
- Port & Terminal Operators
- Canada
- Corps Operations
- Corps

Supported by:
- Contractors
- Customs/Marad
- Corps Offices
- NDC Staff

Internal Activities:
- Enforcement
- Editing
- Routing
- Information

Generation
- Publishing
- Data Integration

Distribution:
- Internet
- CD ROM
- Fact Card
- WCUS
- OMBIL
- Infrastructure
- Business Lines

U.S. Army Corps of Engineers

Constraints

Collection → Input/Processing → Distribution

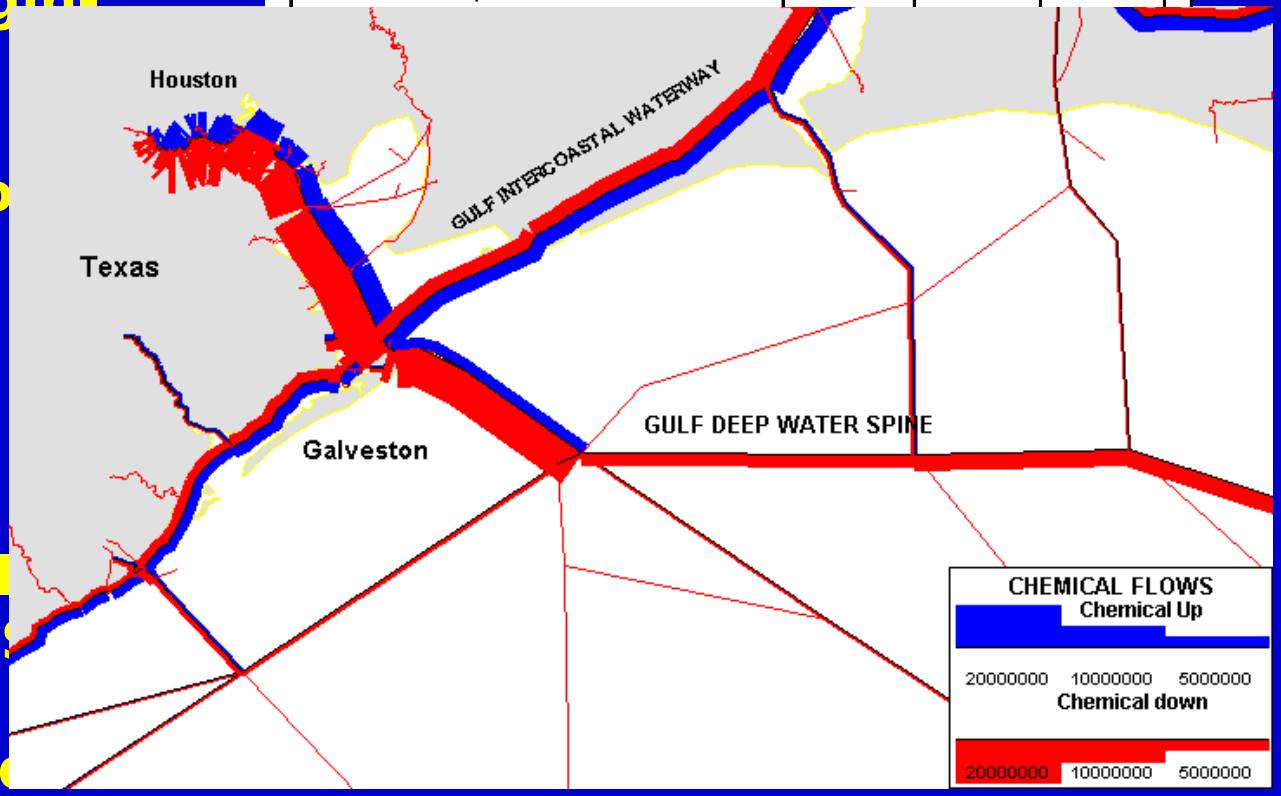
U.S. Army Corps of Engineers

Waterborne Commerce Statistics

- Collect vessel movements - tonnages by commodity; trips by draft; origin-dest.
- Provide information for decision-making (e.g. trip, ton-miles)
- Produce statistical reports (e.g. WCUS
- Train providers and

HOUSTON SHIP CHANNEL, TX
Freight Traffic, 1999 - Continued
(thousand short tons)

Commodity		Total	Foreign	
			Imports	Exports
Total chemicals and related products		13,227	3,722	9,161
Subtotal fertilizers		1,011	65	931
3110	nitrogenous fert.	68	40	28
3120	phosphatic fert.	1	0	1
3130	potassic fert.	695	0	686



U.S. Army Corps of Engineers

DOMESTIC DATA

All Domestic Waterborne Commercial Vessel Moves: Ships, Barges , Towboats, Tugboats, Crew Boats, Newly Constructed Vessels, Supply Boats , Ferries

Exceptions: Recreational, Fishing, Fire, Police, Patrol, Dredges, Construction Vessels (Pile drivers, Crane Barges)

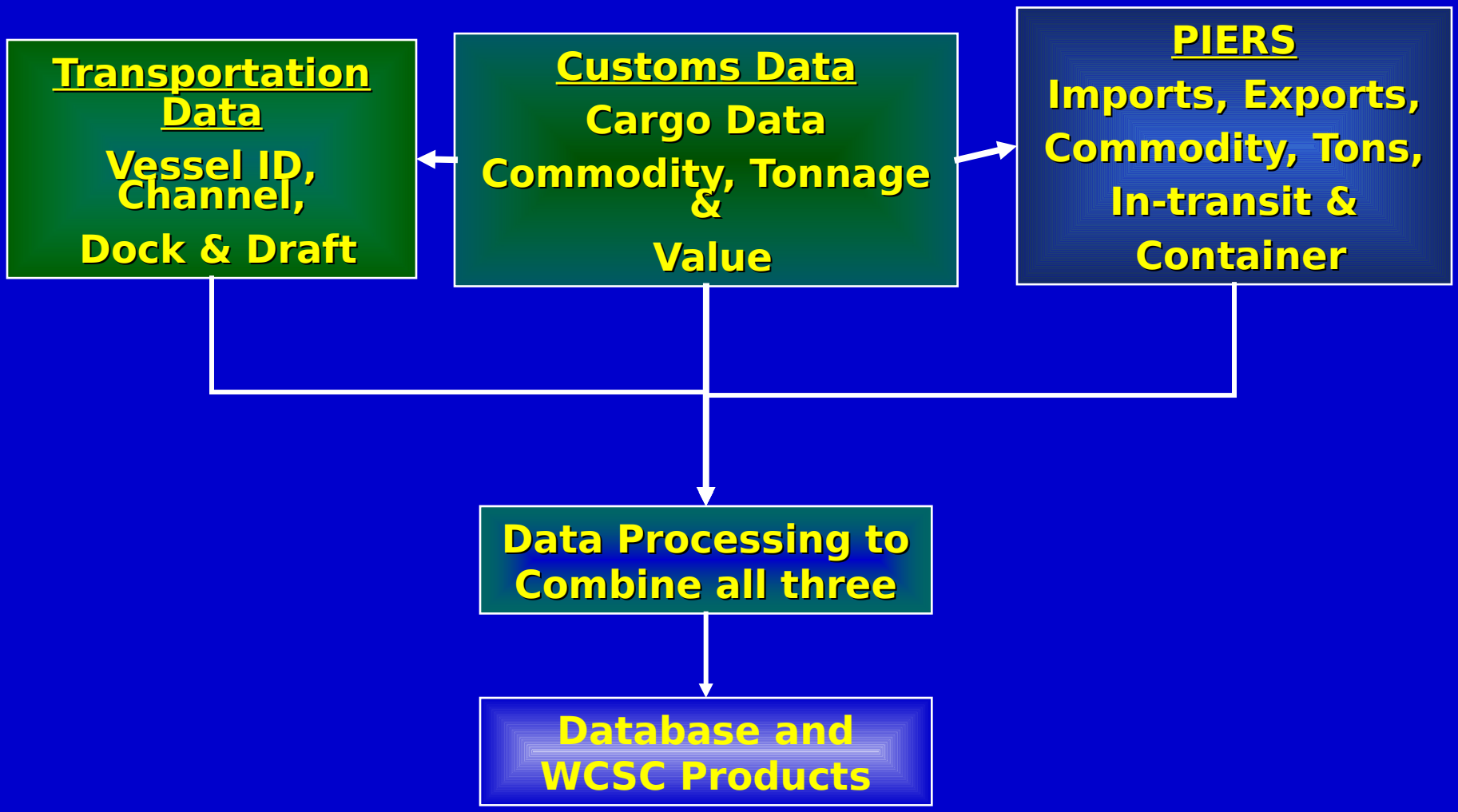
U.S. Army Corps of Engineers

FOREIGN DATA

- Country of origin
- Foreign port of lading
- U.S. port of unlading
- Commodity
- Weight
- Inland U.S. Destination
- Consignee / Importer
- Country of destination
- U.S. port of lading
- Foreign port of unlading
- Inland U.S. origin
- Shipper / Exporter
- Foreign port of lading / unlading for in-transits
- Vessel

U.S. Army Corps of Engineers

WCSC's U.S. Foreign Waterborne Manifest-based & Transportation Statistics



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File Edit View Favorites Tools Help

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Navigation - FY 2007 Budget All Performance Measures by District/CWIS (Table)

Financial &Dredging Data through Apr. 2006, Output and Performance Data through Dec. 2005. Five Year Averages for FY1999-FY2002 are invalid

MEASURES

1. Financial
2. Inventory
3. Output
4. Performance

Exit

Size: 800 x 600 | 1024 x 768 | 1280 x 1024 **View:** Single View | Multi-View

USACE & State & CWIS: SAVANNAH HARBOR-075085 **Commodity:** All Commodities **Draft:** All Drafts **Appropriatio:** Operat

	FY2005	FY2004	FY2003	FY2002	FY2001	FY2000	FY1999
Tons (#)	29,231,741	27,227,250	22,950,093	19,641,045	19,661,940	18,186,733	18,581,036
Ton Miles (#)	0	0	0	0	0	0	0
Trips (#)	7,696	7,247	7,099	10,846	11,209	9,735	9,887
Actual Cubic Yards ...	4,482,972.00	7,608,898.00	529,921.00	2,873,262.00		12,422,069.00	8,606,387.00
Exp ($): Nav	$13,118,817.64	$11,248,444.31	$13,825,257.98	$7,351,525.10	$10,845,099.62	$14,440,956.22	$13,607,039.08
Trip Ton Miles (#)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost per Ton ($)	$.45	$.41	$.60	$.37	$.55	$.79	$.73
Cost per Ton Mile ($)							
Cost per Trip ($)	$1,704.63	$1,552.15	$1,947.49	$677.81	$967.53	$1,483.41	$1,376.26
Tons 5 yr avg (#)	23,742,414	21,533,412	19,804,169	15,214,151	11,285,942	7,353,554	3,716,207
Ton Miles 5 yr avg (#)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trips 5 yr avg (#)	8,819.40	9,227.20	9,755.20	8,335.40	6,166.20	3,924.40	1,977.40
Actual Cubic Yards ...	3,099,010.60	4,686,830.00	4,886,327.80	4,780,343.60	4,205,691.20	4,205,691.20	1,721,277.40
Exp 5 yr avg ($)	$11,277,828.93	$11,542,256.65	$12,013,975.60	$9,248,924.00	$7,778,618.98	$5,609,599.06	$2,721,407.82

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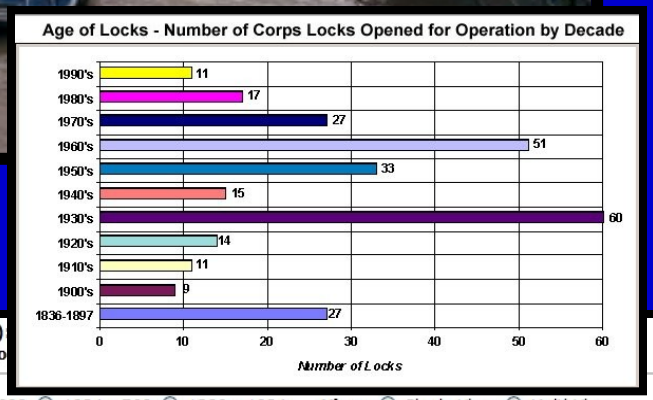
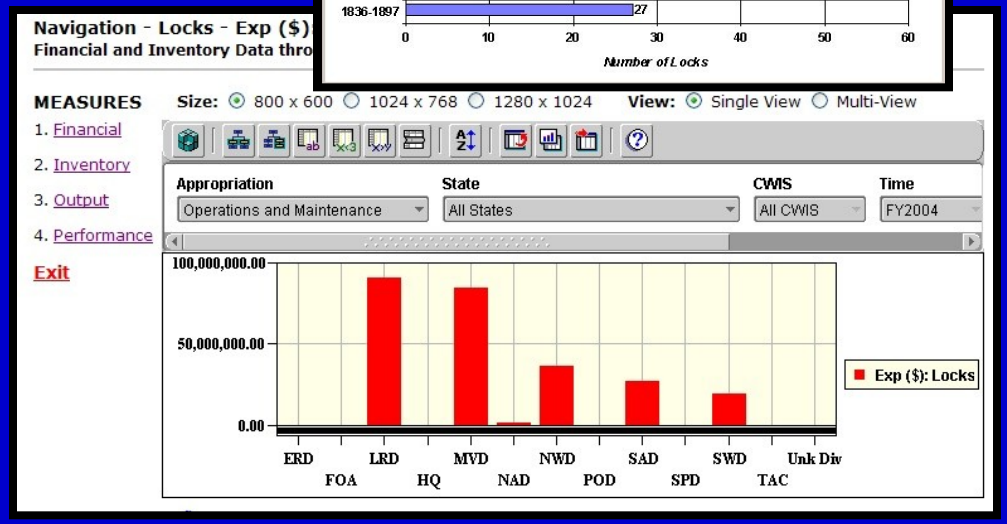
Navigation Locks

U.S. Army Corps of Engineers





- **Status:** Operational Since FY 1992

- **New Capabilities:** Integrated with Waterborne and CEFMS data. Improved Unavailability Codes.

- **FY 2008 Budget Support:** All Measures Available at the Project and National Level

- **Future Activities:** Improve Data Collection Methods and Correlation

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File Edit View Favorites Tools Help
Back Search Favorites

Navigation - Locks - Lock Sites (#)

Financial and Inventory Data through Apr. 2006, Output and Performance Data through Dec. 1999

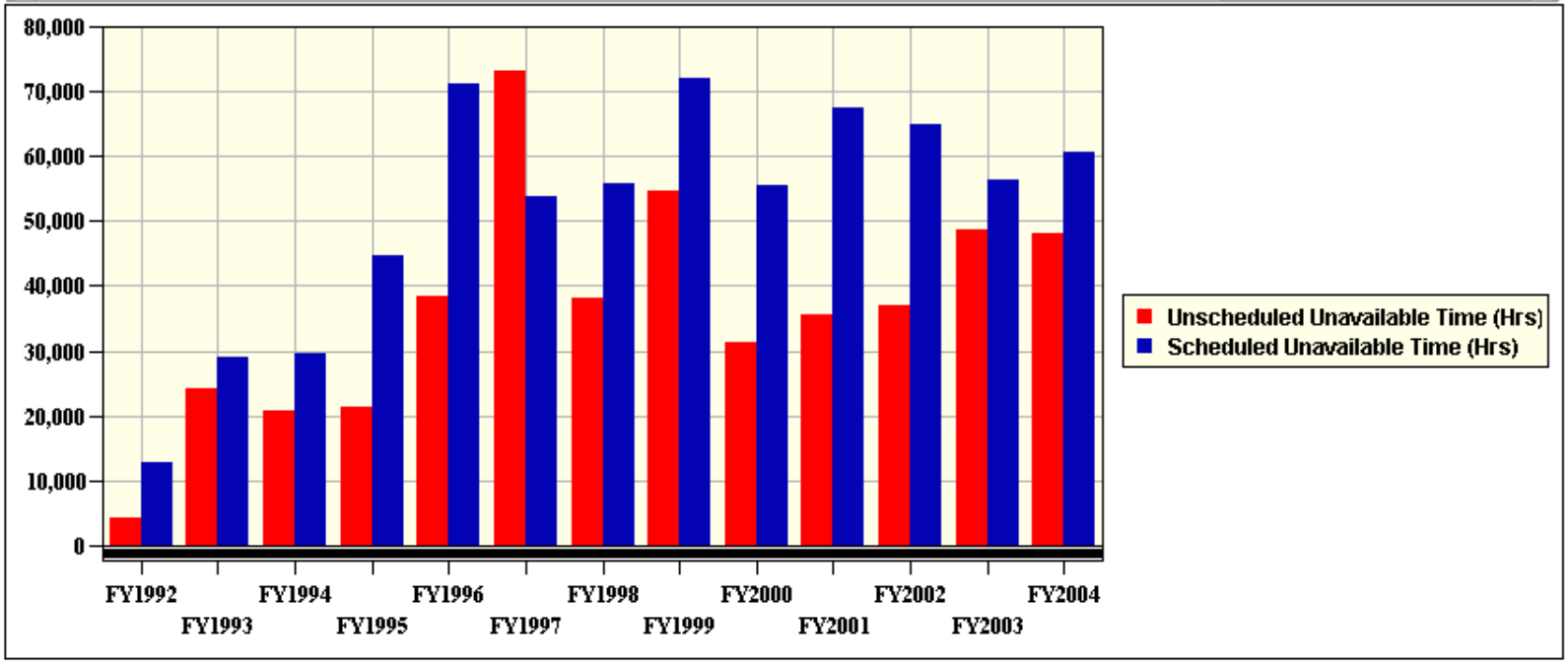
MEASURES

1. Financial
2. Inventory
3. Output
4. Performance

Exit

Size: 800 x 600 | 1024 x 768 | 1280 x 1024 View: Single View | Multi-View

Unavailability Code: All Unavailability Codes | CWIS: All CWIS | State: All States | USACE & State: All USACE | Direction: All Direction | Commodity: All Commod



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File Edit View Favorites Tools Help
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Navigation - Locks - Lock Sites (#)

Financial and Inventory Data through Apr. 2006, Output and Performance Data through Dec. 1999

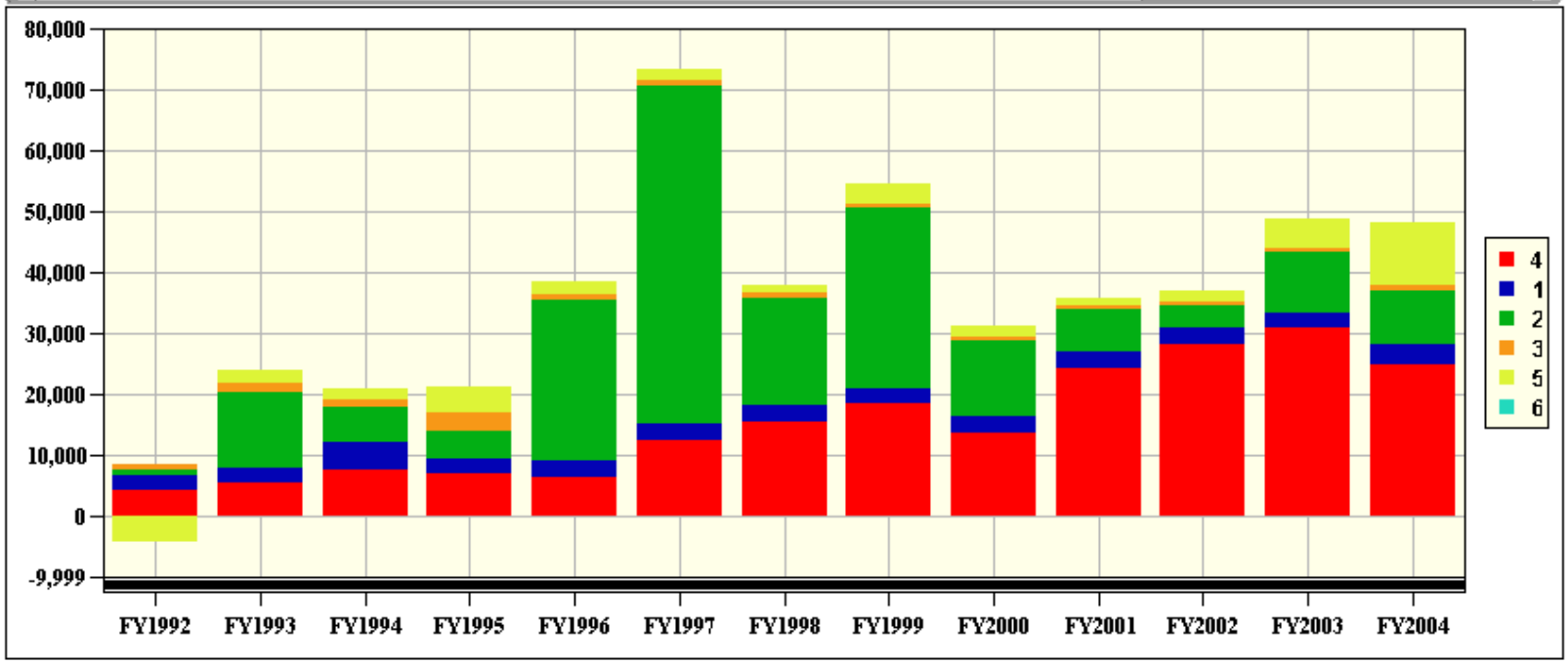
MEASURES

1. Financial
2. Inventory
3. Output
4. Performance

Exit

Size: 800 x 600 | 1024 x 768 | 1280 x 1024 **View:** Single View | Multi-View

Measure	CWIS	State	USACE & State	Direction
Unscheduled Unavailable Time (Hrs)	All CWIS	All States	All USACE	All Direction



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U.S. Army Corps of Engineers

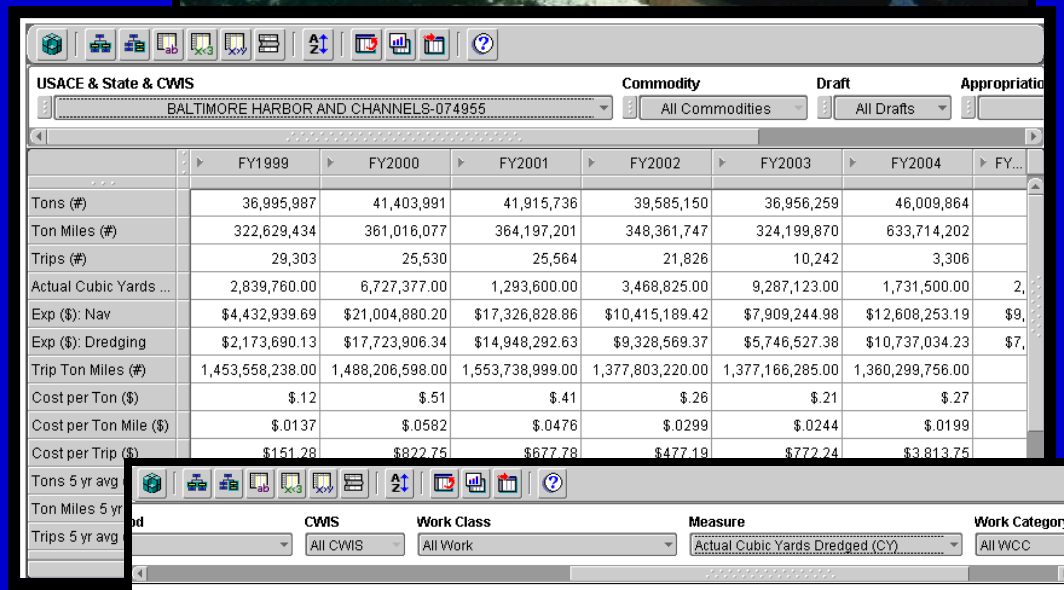
Navigation Dredging

- **Status:** Operational Since FY 1992

- **New Capabilities:** Integrated with Waterborne and CEFMS data.

- **FY 2008 Budget Support:** All Measures Available at the Project and National Level

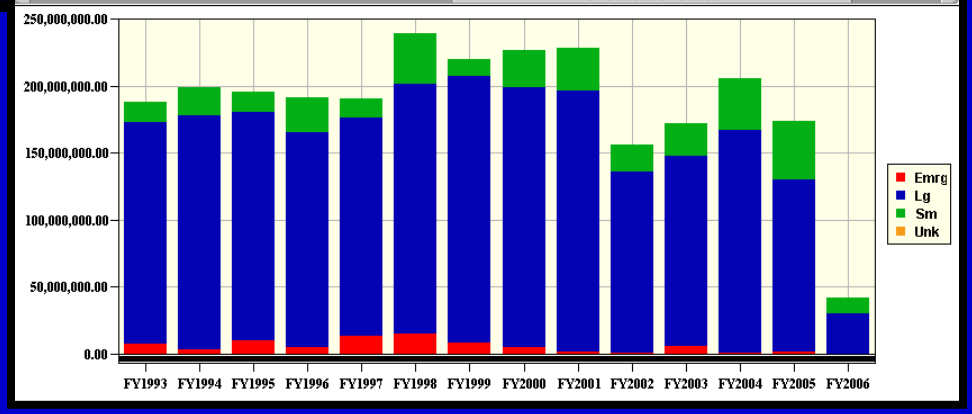
- **Future Activities:** Refine geographic detail.



USACE & State & CWIS: BALTIMORE HARBOR AND CHANNELS-074955 | Commodity: All Commodities | Draft: All Drafts

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
Tons (#)	36,995,987	41,403,991	41,915,736	39,585,150	36,956,259	46,009,864
Ton Miles (#)	322,629,434	361,016,077	364,197,201	348,361,747	324,199,870	633,714,202
Trips (#)	29,303	25,530	25,564	21,826	10,242	3,306
Actual Cubic Yards ...	2,839,760.00	6,727,377.00	1,293,600.00	3,468,825.00	9,287,123.00	1,731,500.00
Exp ($): Nav	$4,432,939.69	$21,004,880.20	$17,326,828.86	$10,415,189.42	$7,909,244.98	$12,608,253.19
Exp ($): Dredging	$2,173,690.13	$17,723,906.34	$14,948,292.63	$9,328,569.37	$5,746,527.38	$10,737,034.23
Trip Ton Miles (#)	1,453,558,238.00	1,488,206,598.00	1,553,738,999.00	1,377,803,220.00	1,377,166,285.00	1,360,299,756.00
Cost per Ton ($)	$.12	$.51	$.41	$.26	$.21	$.27
Cost per Ton Mile ($)	$.0137	$.0582	$.0476	$.0299	$.0244	$.0199
Cost per Trip ($)	$151.28	$822.75	$677.78	$477.19	$772.24	$3,813.75
Tons 5 yr avg						
Ton Miles 5 yr						
Trips 5 yr avg						

CWIS: All CWIS | Work Class: All Work | Measure: Actual Cubic Yards Dredged (CY) | Work Category: All WCC



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Navigation - Dredging - Number of Jobs by Dredging Equipment (Historical)

Data through Apr. 2006

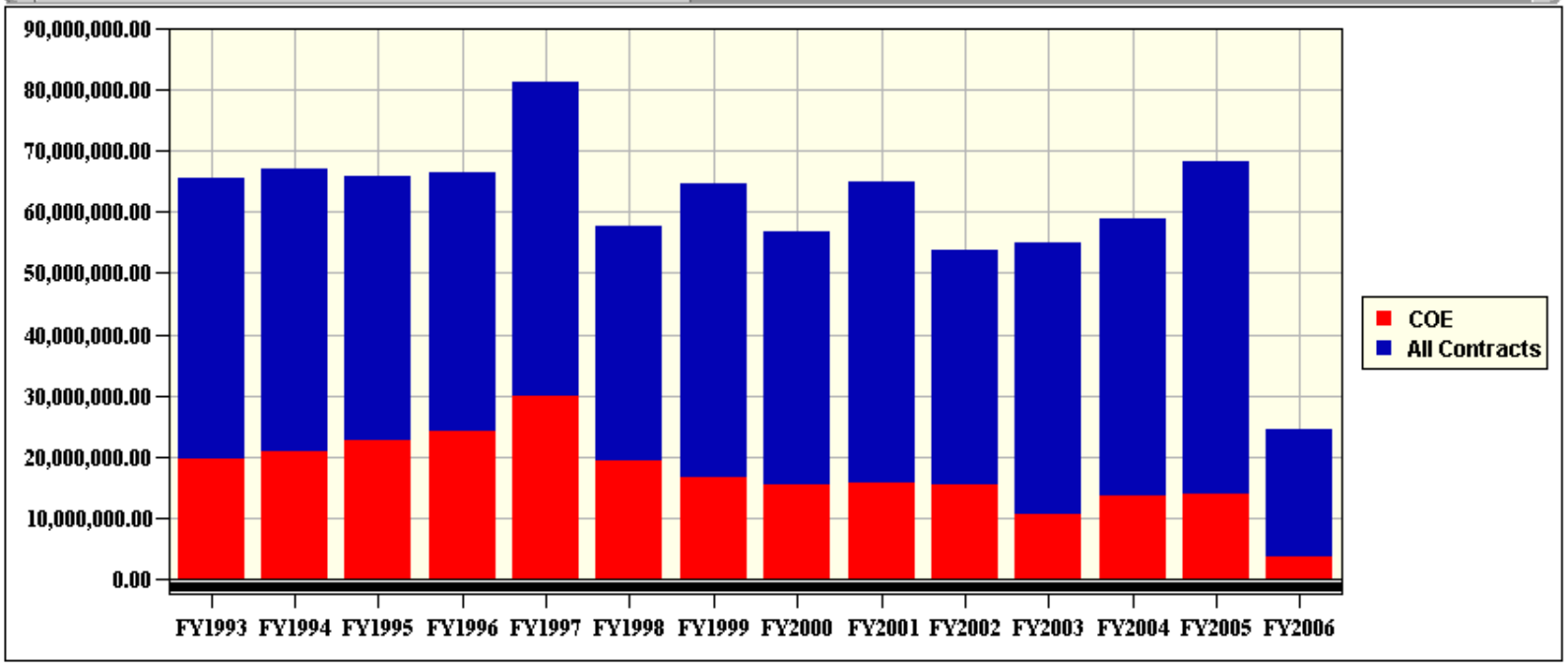
MEASURES

1. Financial
2. Inventory
3. Output
4. Performance

Exit

Size: 800 x 600 | 1024 x 768 | 1280 x 1024 **View:** Single View | Multi View

USACE: All USACE **State:** All States **Disposal Method:** All Disposal **CW:** Al



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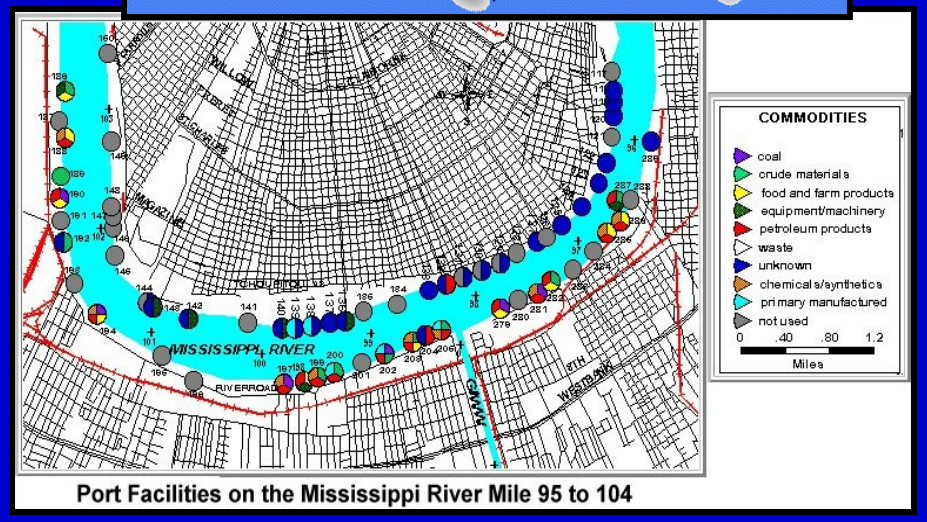
U.S. Army Corps of Engineers

Navigation Infrastructure Inventory

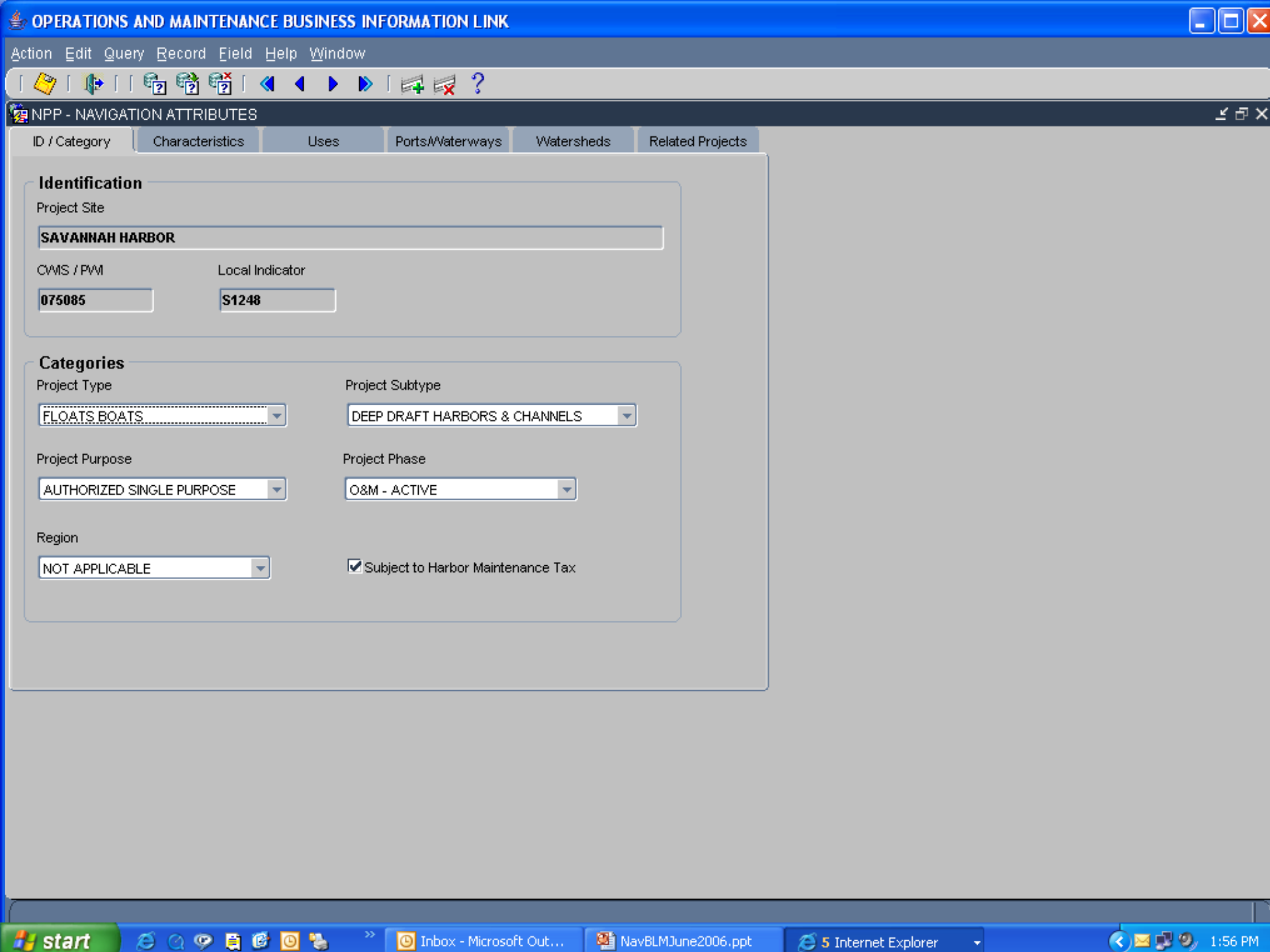
- **Inventory;** 1,600 Corps projects, 200 Commercial Ports, 9,000+ Waterway Facilities, 195 Corps Locks

- **Outputs:** Corps project profile, Waterway Facility Characteristics related to our Customers

- **Supports:** Quality Assurance of Waterborne Commerce Data, Permits, Budget and Homeland Security



Port Facilities on the Mississippi River Mile 95 to 104


OPERATIONS AND MAINTENANCE BUSINESS INFORMATION LINK
Action Edit Query Record Field Help Window
NPP - NAVIGATION ATTRIBUTES
ID / Category
Characteristics
Uses
Ports/Waterways
Watersheds
Related Projects
Identification
Project Site
SAVANNAH HARBOR
CWIS / PWI
075085
Local Indicator
S1248
Categories
Project Type
FLOATS BOATS
Project Subtype
DEEP DRAFT HARBORS & CHANNELS
Project Purpose
AUTHORIZED SINGLE PURPOSE
Project Phase
O&M - ACTIVE
Region
NOT APPLICABLE
Subject to Harbor Maintenance Tax
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U.S. Army Corps of Engineers

Issues/Concerns

- Flat Budget = Reduced Services
- Significance of Cargo Value
- Lock Unavailable Quality & Completeness
- Redundant Lock Input Systems
- Dredging Data Completeness & Quality
- Infrastructure Data Reflects Needs
- Asset Management
- Establish Navigation Data User Group

U.S. Army Corps of Engineers

Cost-Saving Measures in FY06

- Eliminate printing but Available on the Web
- Eliminate coding and keying of towboat reports and empty barge moves
- Increase automation
- Not purchase in-transit identification nor shipper/consignee data from PIERS
- Reduce staff 20%

U.S. Army Corps of Engineers

Cost-Saving Measures in FY07

- Reduce staff
- Produce only one Foreign data product
- Increase automation

U.S. Army Corps of Engineers

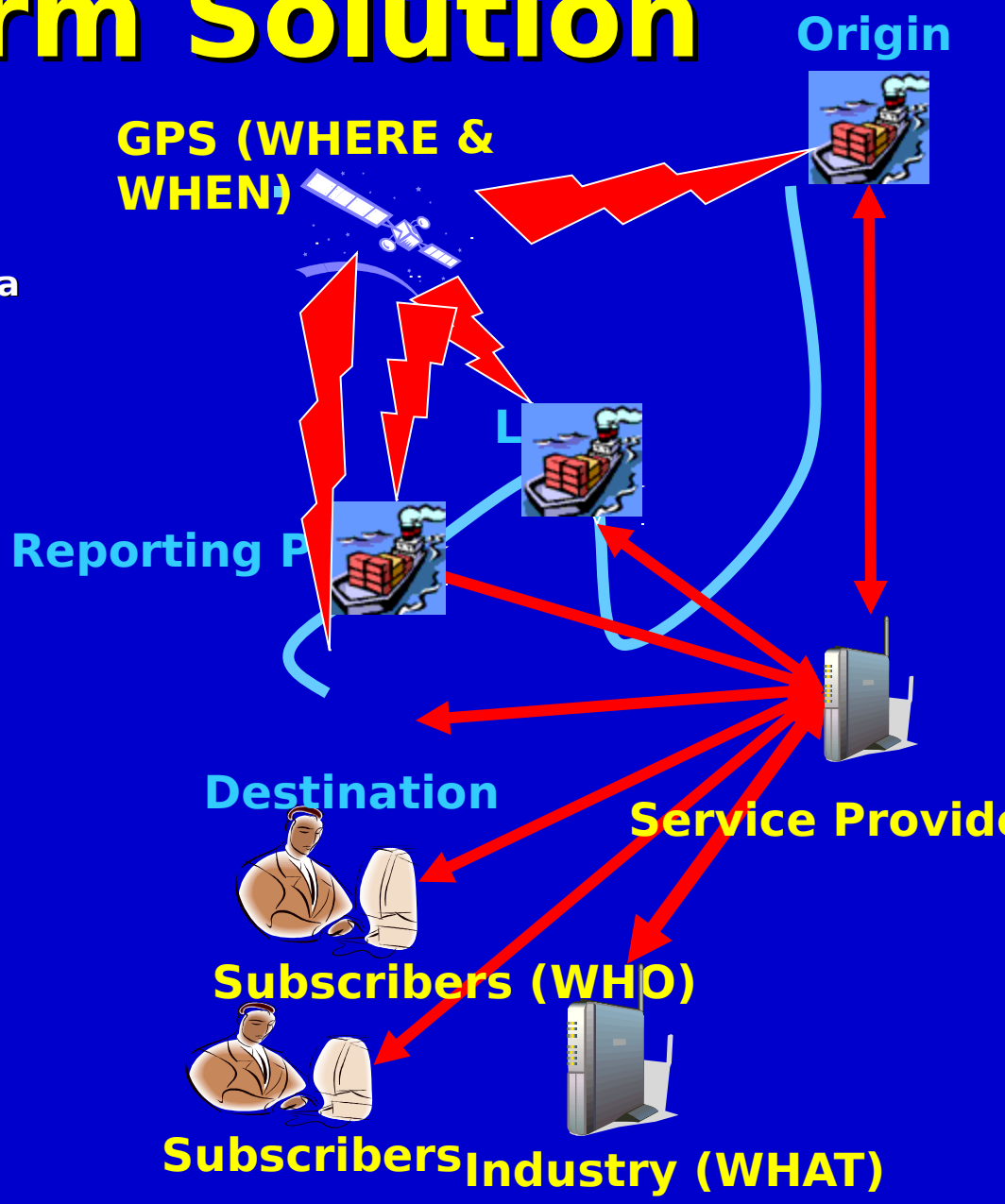
Impacts of Cost-Saving Measures

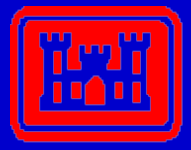
- Reduced data sets
- Less service to public, state, local, and other federal agencies
- Reduced quality control by staff

U.S. Army Corps of Engineers

Long Term Solution

- **Technology**
  - GPS
  - Standardized Electronic Data
  - Data Provided by Industry Databases
- **Partnerships**
  - Federal Government
  - Associations
  - Industry
  - Service Provider
- **Result**
  - Geographically accurate, timely, consistent and complete data .
- **Industry Incentive**
  - Fleet Management Tool
  - First In Line
  - Reduced IWFT & HMF
  - Free Equipment
  - Elimination of manual data submission





U.S. Army Corps
of Engineers

U.S. Army Corps
of Engineers

WCSC Detail Record

Vessel Operating Company ID

Vessel ID and Type

Origin

Destination

Draft

Commodity

Traffic

Tons

Trips

Links Traversed

Miles From Origi

to Destination

U.S. Army Corps of Engineers

PIERS "Only Source" Data Elements

Foreign Clearing Port U.S. City

In-transit Foreign Country Foreign City

Loaded Container Size TEUS Loaded

Number Loaded Containers FEUS Loaded

Shipping Line Reefer Cargo

Hazardous Cargo RoRo Cargo

U.S. Army Corps of Engineers

PIERS as Primary Data Source

- Better geographic accuracy
- Better coverage
- Better foreign clearing port
- Includes in-transit movements
- Reefer cargo identification
- RoRo cargo identification

U.S. Army Corps of Engineers

Major Historical Products

- Waterborne Commerce of the U. S. Parts 1-5 (WCUS)
  - Archive back to 1915
- Waterborne Transportation Lines of the U. S. (WTLUS)
  - Archive copies back to 1940
- Summary of U. S. Flag Vessels
  - Historical copies back to 1949
- Fact Card

U.S. Army Corps of Engineers

Other WSCS Available Data

- **Dock File**
  - Facilities, Waterways, Mile Points, Ports, Docks, States, Links (Latitude/Longitude)
- **Vessel File**
  - Vessel Characteristics, Reporting Company, Coast Guard Number
- **Vessel Operator File**
  - Name, Address
- **Port / Waterway File**
  - Name, Depth

U.S. Army Corps of Engineers

Other WCSC Products

- Manuscript Data File (WCUS on diskette)
- Selected Ports of the U. S.
- Public Domain Databases
  - Region to Region
  - State to State
- Estimated Waterborne Commerce
  - National Totals
  - Major Inland Waterways
- Waterborne Tonnage by States

Hydropower

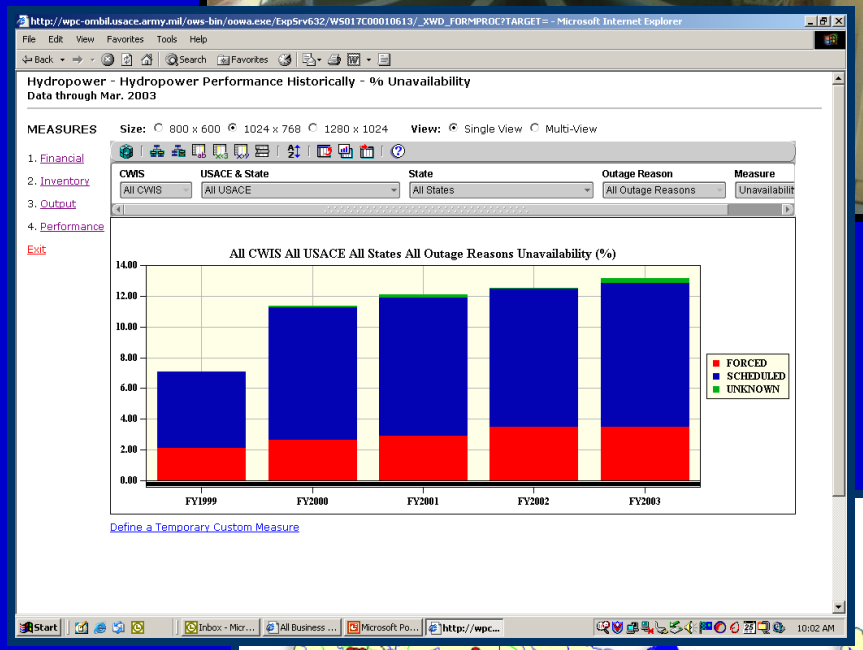
U.S. Army Corps of Engineers

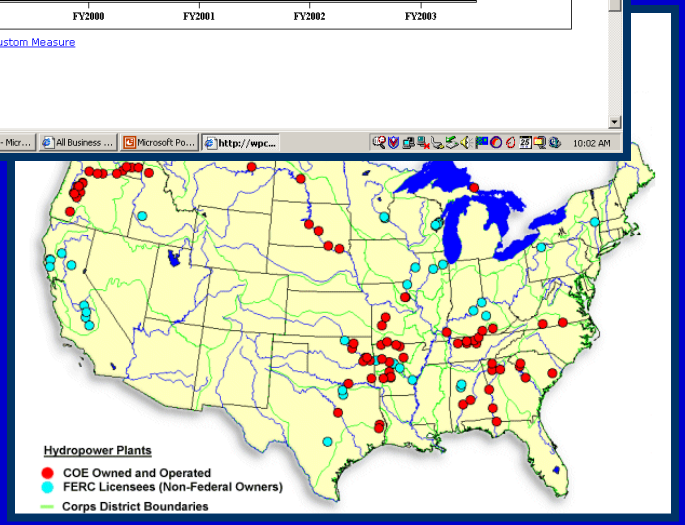
- **Status:** Operational Since FY 1999

- **New Capabilities:** Plant Control Systems (GDAC) in 5 Plants in NWD
Automatically Upload Event Logs to
OMBIL; Hydropower Equipment Exchange “eBay” of Hydropower Equipment

- **FY 2008 Budget Support:** All Five Measures Available at the Project and National Level

- **Future Activities:** Refine Standard Reports for Budget,





Recreation

U.S. Army Corps of Engineers

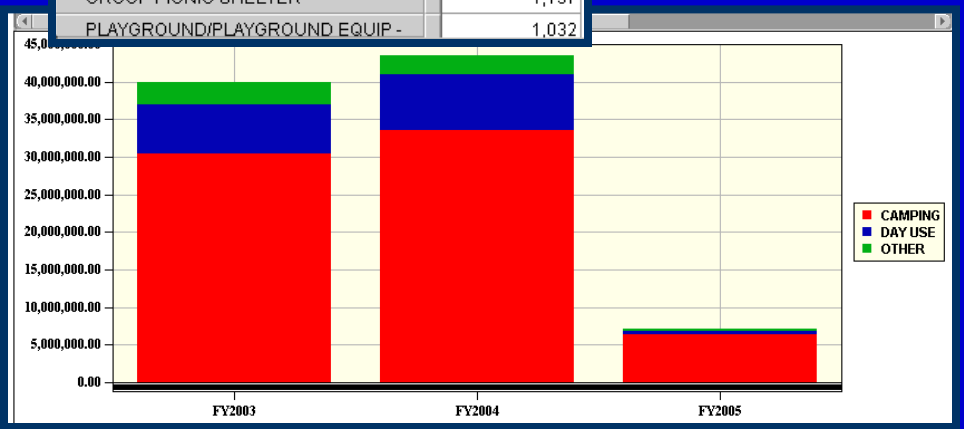
- **Status:** Operational Since FY 2000

- **New Capabilities:** Includes Revenue Data from NRRS, CEFMS & Provides Data for NRM Gateway and Inventory and Visitation Data for RecBest

- **FY 2008 Budget Support:** Provided Base Data for RecBest and Other Measures.

- **Future Activities:** Improve Data Completeness and Accuracy; Enhance Support to VERS, Rec.gov and NRRS; & Incorporate Modifications in Support of the Budget Process

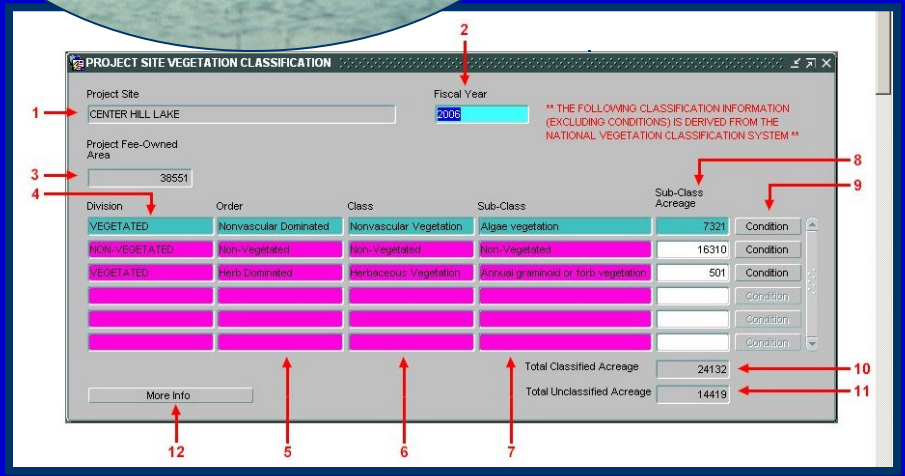
CAMPSITE	49,414
CAMPSITE - OUTGRANTED	36,876
PICNIC SITE - OUTGRANTED	18,081
PICNIC SITE	10,686
DRY STORAGE - OUTGRANTED	9,449
PARKING LOT - OUTGRANTED	6,628
PARKING LOT	6,421
BOAT MOORING - OUTGRANTED	3,686
CABIN - OUTGRANTED	3,499
RESTROOM	3,455
RESTROOM - OUTGRANTED	1,857
BOAT RAMP	1,837
ROAD	1,713
BOAT RAMP - OUTGRANTED	1,463
GROUP PICNIC SHELTER	1,137
PLAYGROUND/PLAYGROUND EQUIP -	1,032



U.S. Army Corps of Engineers

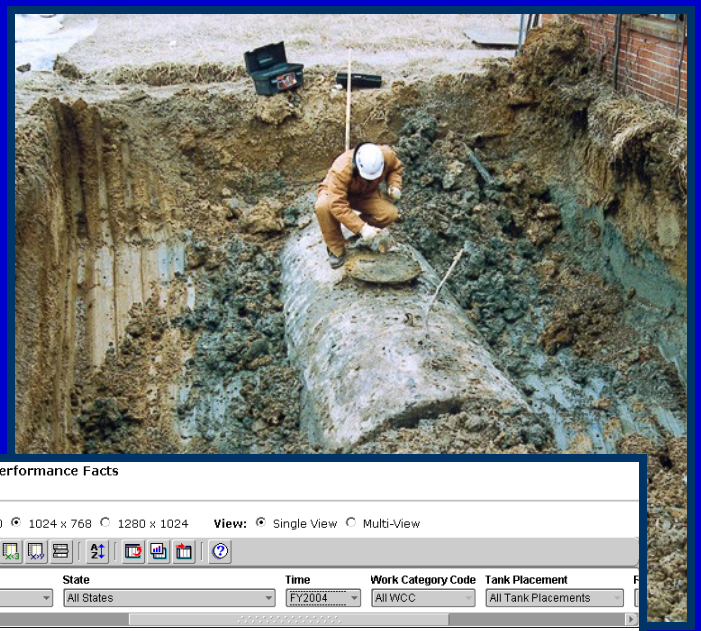
Environment Stewardship

- **Status:** Operational FY 2006
- **New Capabilities:** Data Input in FY 2006 & Link with ES-Best for FY 2008.
- **FY 2008 Budget Support:** Performance Measures Developed and Will Be Incorporated in OMBIL for FY 2008 Budget
- **Future Activities:** Performance Measure Development & Enhancement

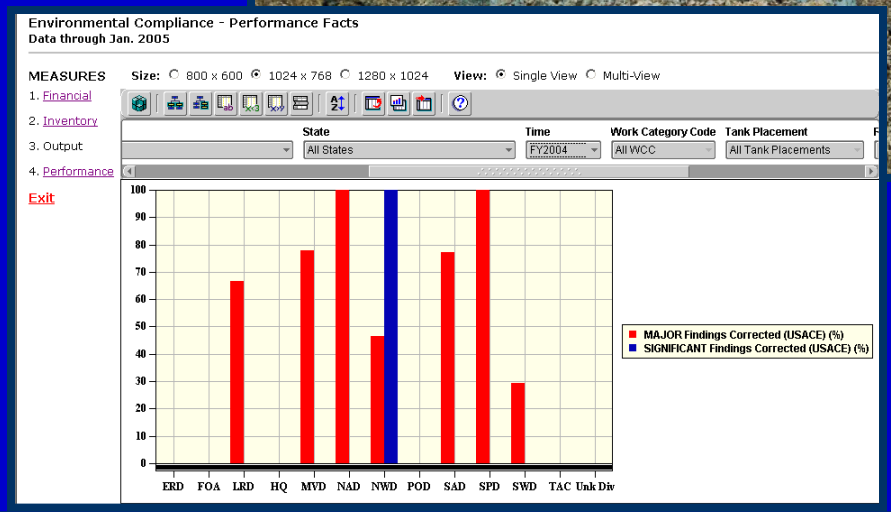


U.S. Army Corps of Engineers

Environment Compliance



- **Status:** Operational Since FY 1999
- **New Capabilities:** Updated Manuals and Minor Enhancements
- **FY 2008 Budget Support:** All Measures Have Been Available and Used Since FY 2000
- **Future Activities:** Enhance Standard Reports for Budget or New Requirements as Requested



	Storage Tanks Installed (Compliant) (#)	Storage Tanks Installed (Non-Compliant) (#)
AST-COMPLETE SECONDARY CONTAINMENT	136	7
AST-NO SECONDARY CONTAINMENT	243	23
AST-PARTIAL SECONDARY CONTAINMENT	44	9
AST-STRUCTURE ACTING AS CONTAINMENT	408	72
OTHER	77	25
UNKNOWN	17	
UST-NOT REGULATED	48	
UST-REGULATED	100	15

Regulatory

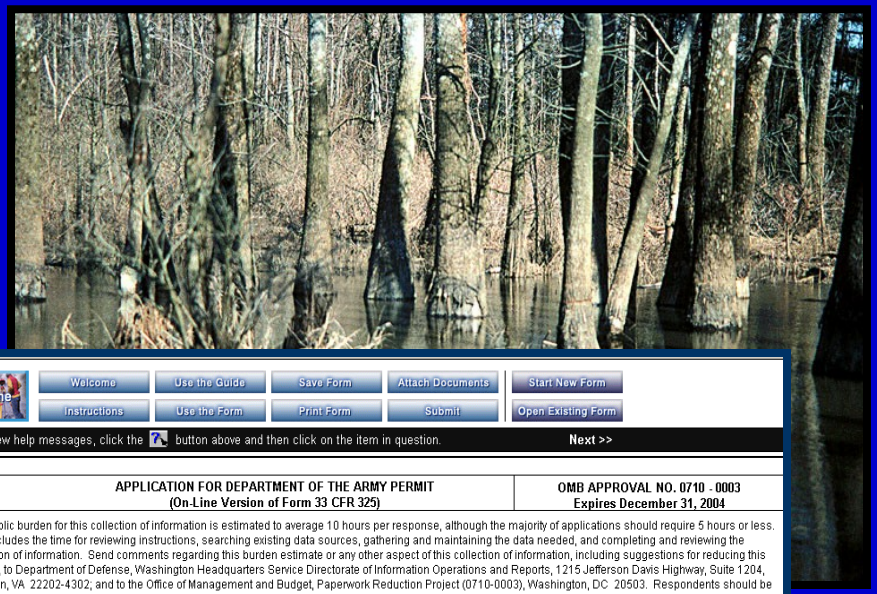
U.S. Army Corps
of Engineers

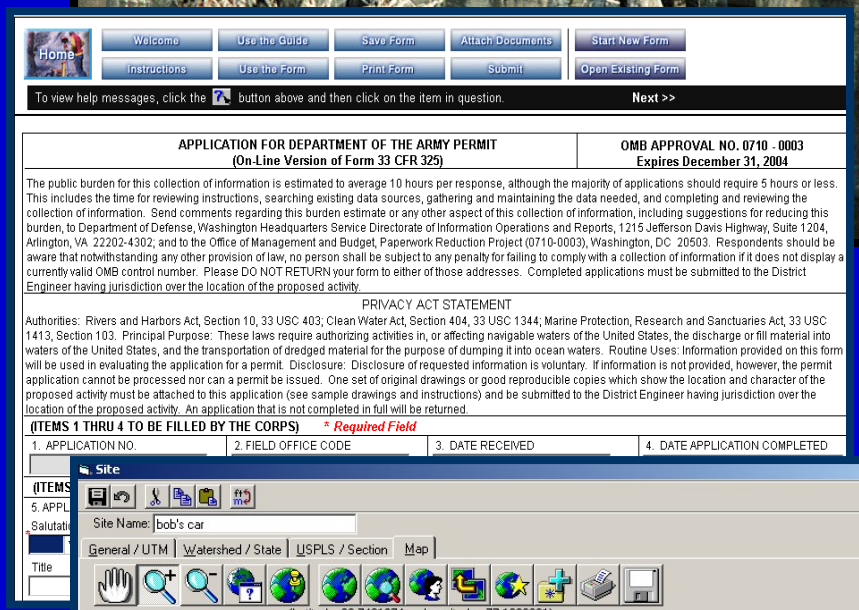
- **Status:** Being Deployed; 13 Districts Completed Balance Scheduled for FY 2006

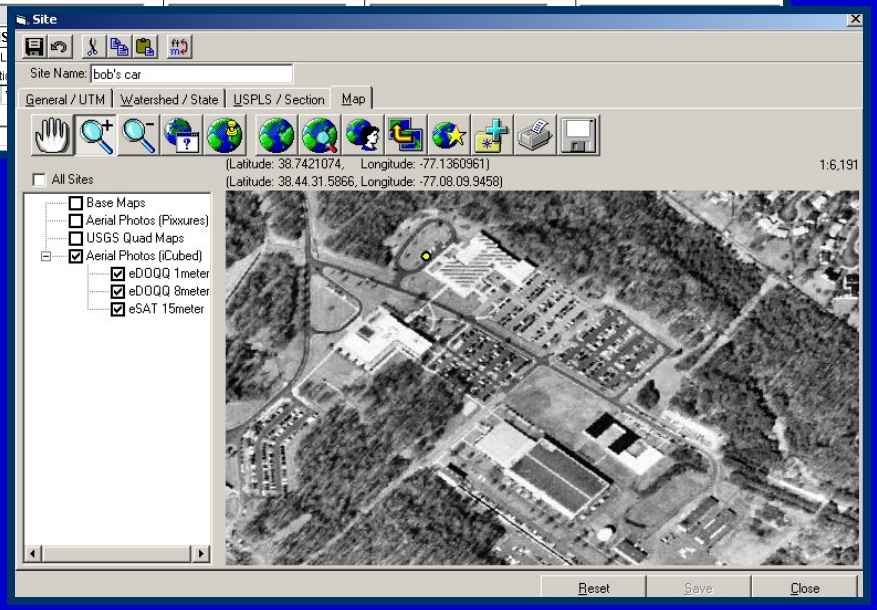
- **New Capabilities:** User Steering Committee Formed; GIS interface eApp for Public to Enter Application and Check Status. Completed Joint E-Permit Initiative with Virginia.

- **FY 2008 Budget Support:** Limit to Deployed Districts

- **Future Activities:** Continue Deployment; Enhance Budget Support; & Continue Interagency Initiative for the Development of Next Generation Decision



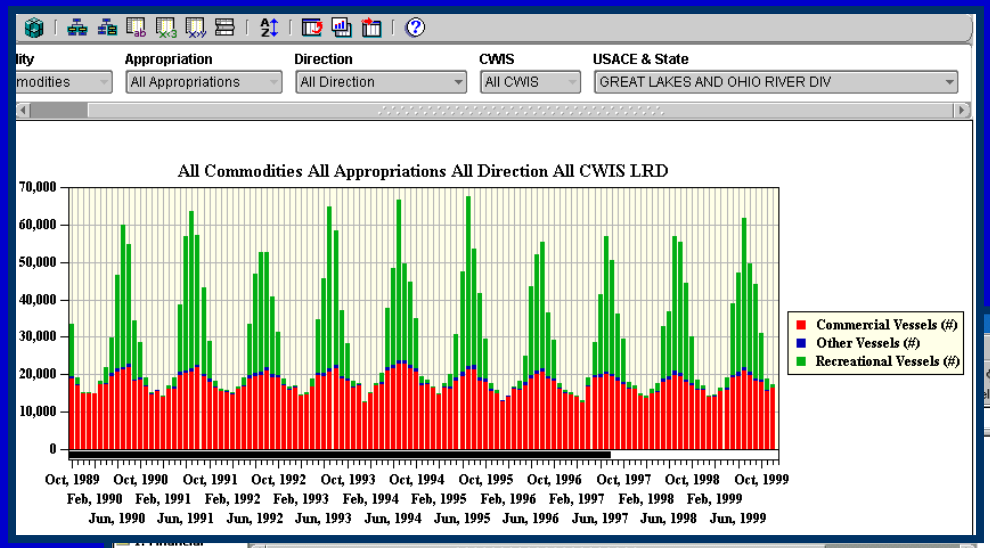


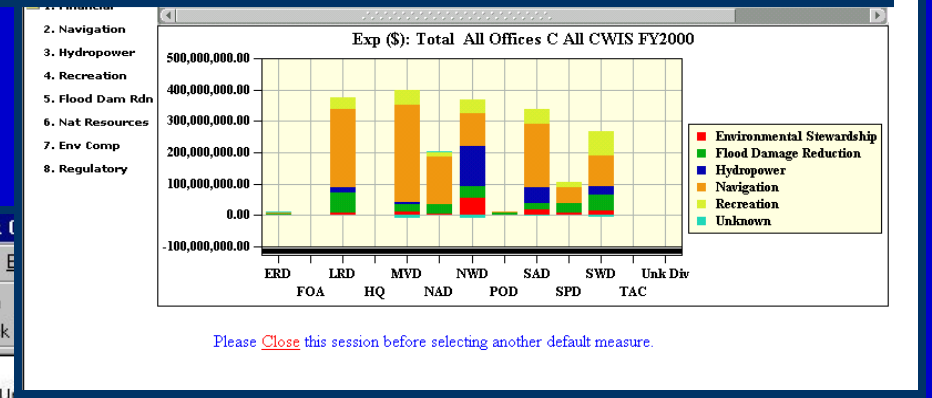


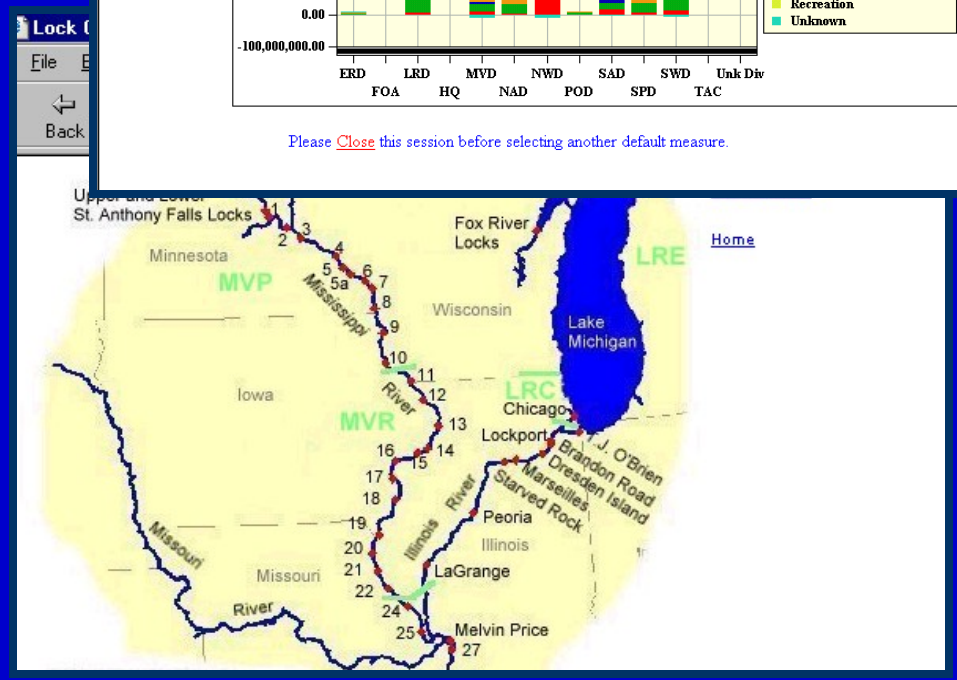
SUMMARY

U.S. Army Corps of Engineers

- Provides Corps Business Lines Expenditures, Activities, Inventories, Outputs and Performance Information
- Provides Single Gateway for Data Input and Access
- Integrates Legacy Information Systems
- Eliminates Duplication of Data Entry
- Provides Corps-wide Access to Business Information and Knowledge







U.S. Army Corps of Engineers

Web Site Address

www.iwr.usace.army.mil/ndc

Institute for Water Resources

- **Navigation Data Center**